

**REMARKS**

Claims 4, 5, 7, 12 and 15 were objected to as being dependent upon a rejected base claim. However, those claims have not been redrafted into independent form because it is believed that base Claims 1 and 9 are also allowable.

Claims 1-3, 6, 8-11, 13, 14, 16 and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Longworth, *et al.*, (Cryopump regeneration studies). Those rejections are respectfully traversed and reconsideration is requested.

Claims 18-19 have been added.

Claims 1 and 9 are directed to a method of maintaining the operating temperature of a cryopump and a cryopump, respectively. A heater is coupled to a cryopumping surface of the cryopump. The heater is controlled during the operation of the cryopump in order to maintain a temperature of the cryopumping surface of the cryopump.

Longworth, *et al.* relates to regeneration effectiveness of a cryopump using different methods of warming and evacuation. The warming is performed by a band heater wrapped around the cryopump housing. Longworth, *et al.* relates to the use of a heater in the regeneration of a cryopump rather than during the operation of a cryopump. Further, the a temperature of a cryopumping surface is not maintained. For these reasons, Claims 1 and 9 are not anticipated by Longworth, *et al.*

With respect to Claims 6 and 14, there is no suggestion in Longworth, *et al.* of maintaining a temperature of a first stage of the cryopump. Only the temperature of the vacuum vessel in Longworth, *et al.* would be controlled.

With respect to Claim 13, there is no suggestion in Longworth, *et al.* of controlling the heaters proportionally by the feedback from the temperature sensor. Moreover, this claim should be allowable because the corresponding method claim, Claim 5, was found to be allowable in the Examiner's prior communication.

With respect to Claim 17, there is no suggestion in Longworth, *et al.* of a system for controlling a cryopump by a means for heating a cryopumping surface of the cryopump and a means for controlling the heater during operation of a cryopump to maintain a temperature of the cryopumping surface of the cryopump. The heater in Longworth, *et al.* heats the cryopump housing during regeneration. In contrast, the claimed heater heats a cryopumping surface of the cryopump to maintain a temperature of that surface during operation.

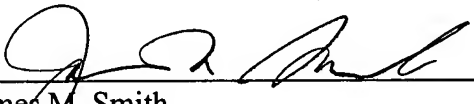
In accordance with newly added Claims 18 and 19, the heater is coupled integrally with the cryopumping arrays, such as directly to the arrays or to the heat station to which the arrays are coupled. There is no suggestion in Longworth, *et al.* of coupling the heater integrally with the cryopumping arrays.

**CONCLUSION**

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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